

52132

**From:** Prasad, Sarada  
**Sent:** Tuesday, October 02, 2001 12:33 PM  
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Sarada Prasad, Ph.D.  
Patent Examiner  
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Tel: 703-305-1009

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RESULT 3  
 MUSAIC2A09/c  
 LOCUS MUSAIC2A09 160 bp DNA ROD 27-APR-1993  
 DEFINITION Mus musculus IL-3 receptor B-subunit (AIC2A) gene, excn 10.  
 /CESSION M94144  
 VERSION M94144.1 GI:191815  
 KEYWORDS IL-3 receptor B-subunit.  
 SEGMENT 9 of 13  
 SOURCE Mus musculus (strain BALB/c. sub\_species domesticus) DNA.  
 ORGANISM Mus musculus  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
 REFERENCE 1 (bases 1 to 160)  
 AUTHORS Gorman,D.M., Itoh,N., Jenkins,N.A., Gilbert,D.A., Copeland,N.G. and Miyajima,A.  
 TITLE Chromosomal localization and organization of the murine genes encoding the beta subunits (AIC2A and AIC2B) of the interleukin 3, granulocyte/macrophage colony-stimulating factor, and interleukin 5 receptors  
 JOURNAL J. Biol. Chem. 267, 15842-15848 (1992)  
 MEDLINE 92348451  
 FEATURES  
 source Location/Qualifiers  
 1..160  
 /organism="Mus musculus"  
 /strain="BALB/c"  
 /sub\_species="domesticus"  
 /db\_xref="taxon:10090"  
 exon 1..160  
 /gene="AIC2A"  
 /number=10  
 BASE COUNT 43 a 42 c 50 g 25 t  
 ORIGIN

Query Match 92.0%; Score 13.8; DB 94; Length 160;

Best Local Similarity 80.0%; Pred. No. 7.9e+02;  
 Matches 12; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Qy 1 RCTCCAYTCRCTCCA 15  
 :|||||:|:|||||  
 Db 132 GCTCCACTCGCTCCA 118

Seq. comparison B.

ULT 2  
990 standard; Protein: 422 AA.

09-OCT-1996 (first entry)  
Human interleukin-11 receptor.  
Interleukin-11 receptor; IL-11 receptor; antibody; antagonist; bone; osteoporosis; Paget disease; myeloma.

Homo sapiens.  
Key Location/Qualifiers  
1..23  
/label= Sig\_peptide  
24..422  
/label= Mat\_protein  
24..365  
/label= Extracellular\_domain  
24..111  
/label= Ig-like\_region  
112..365  
/label= Type-1-cytokine\_region  
366..390  
/label= Transmembrane\_domain  
391..422  
/label= Intracellular\_domain

WO9619574-A1.

27-JUN-1996.

27-NOV-1995; 95WO-US15400.

22-DEC-1994; 94US-0362304.

(GEM) GENETICS INST INC.

Tobin JF.

WPI: 1996-309588/31.

N-PSDB; AAT33278.

New nucleic acid encoding human interleukin 11 receptor - and related protein, antibodies, receptor antagonists, etc., useful for treating and preventing loss of bone mass

Claim 13; Page 35-37; 5'pp; English.

Human interleukin-11 (IL-11) receptor (AAR99090) is thought to play a role in the regulation of bone maturation and repair. Its amino acid sequence was deduced from a cDNA clone (AAT33278) isolated from a human activated peripheral blood mononuclear cell cDNA library. Recombinant IL-11 receptor or its fragments, pref. amino acids 24-422, 24-365 (soluble extracellular domain), 391-422, 102-422 or 102-365, can be expressed in host cell systems. It is used to treat/prevent loss of bone mass (e.g. osteoporosis, Paget's disease, multiple myeloma or hypogonadal conditions), as well as immune diseases and cancer.

## Sequence Comparison A

Sequence 422 AA;  
Query Match 98.9%; Score 2257.5; DB 17; Length 422;  
Best Local Similarity 99.5%; Pred. No. 1.4e-148;  
Matches 421; Conservative 0; Mismatches 1; Indels 1; Gaps 1;  
1 MSSSCSLSRVLAVATALVSASSPCQANGCPGVQVQCPGRSVKLCPCGVTAGDPVSWF 60  
1 mssscslsrvlavatalvsasspcqangcpvgvqvgpgrsvkllccpgvtgdpvswf 60  
61 RDGEPKLLQGDPSGLG\*ELVLAQADSDTEGYICQTLIDGALGGTTLTQLGYPARPVWSC 120  
61 rdgpkllqgdpdsglg\*elvlqaadstdegyicqtlidgalggtvtlqlgyparpvsc 120  
121 QAADYENFCTWSPSQISGLPTRYLTSYRKKTVLGADSRQRSPSTGWPQCPQDPLGAARC 180

25 09:33:07 2001

us-09-

Db 121 qaadyenfctwspsqisglptryltsyrkktvlgadqrspstgwpqcpqdpigaarc 180  
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Db 181 vvhgaefwsqyrinvtenvpl-gastrlldvslqslrpdpgqlrvsvpyprrilas 239  
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Db 240 wtypaswpcqphflkfrlqyrpaqhpawstvepagleevitdavaglpahrvvsardfl 299  
Qy 301 DACTWSTWSPWANGTSTGTIPKEIPAWCOLHTQEPVQVDSAPPAPPSLOPHPRLLDH 360  
Db 300 dagtcwstwspeawgtbstgtipkeipawqqlhtqpevepqvdsappprpslqphprlldh 359  
Qy 361 RDSVEQVAVLASLGILSFLGLVAGALALGLWLRRRGGKDGSPKPGFLASVTPVDKRPGA 420  
Db 360 rdsveqvavlaslgilslfslglvagallglwlrllrggkdgspkpgflasvlpvdrrpg 419  
Qy 421 PNL 423  
Db 420 pnl 422